

ABSTRACT OF THE DISCLOSURE

A method and composition for removing ion-implanted photoresist from semiconductor substrates having such photoresist is described. The removal composition contains supercritical CO₂ (SCCO₂), a co-solvent and a reducing agent for use in removing ion-implanted photoresist. Such removal composition overcomes the intrinsic deficiency of SCCO₂ as a removal reagent, viz., the non-polar character of SCCO₂ and its associated inability to solubilize species such as inorganic salts and polar organic compounds that are present in the photoresist and that must be removed from the semiconductor substrate for efficient cleaning.